

twelve years, on an average of 150 to 200 infants daily, the conclusions are drawn that milk sterilised at 108° C. preserves all its nutritive value, and is in no way inferior to milk pasteurised at 80° C. or simply heated to 100° C. No appreciable decrease in the readiness with which the milk was assimilated could be noticed, and not a single case of infantile scurvy occurred. The percentage of infants incapable of utilising sterilised milk was between 3 per cent. and 4 per cent.

#### NEW SOUTH WALES.

**Royal Society**, October 5.—Mr. C. O. Burge, president, in the chair.—Ethnological notes on the aboriginal tribes of New South Wales and Victoria: R. H. Mathews.—Preliminary observations on radio-activity and the occurrence of radium in Australian minerals: D. Mawson and T. H. Laby. A brief summary of observations on the radio-activity of minerals and occurrence of radium is given, showing that comparatively intense activity is only found associated in minerals with thorium and uranium. A tobernite and euxenite were found highly active, but the specimens were too small to examine for radium. A Western Australian gadolinite, found by Prof. Norman Collie to contain one bubble of helium in ten grams, was expected to contain radium, but none could be detected. Twelve monazites were found radio-active; one, with double the average activity of the others, from Pilbarra, Western Australia, gave on heating the radium emanation; five monazite and zircon sands were also active. No relation between thoria contents and activity was found, which points to the presence of uranium.—The flood deposits of the Hunter and Hawkesbury Rivers: Prof. F. B. Guthrie and Prof. T. W. Edgeworth David.

#### CAPE TOWN.

**South African Philosophical Society**, September 28.—Dr. J. D. F. Gilchrist, president, in the chair.—A new South African cypress, *Callitris schwarzi*, Marl.: Dr. R. Marloth. The two species of cypress hitherto known from South Africa belong to the genus *Widdringtonia*, which, however, is now mostly merged into the genus *Callitris*. Until recently only one other species of *Widdringtonia* was known, viz. *W. Commerstoni* from Madagascar, but lately a fourth species has been found by Whyte on the Shire Highlands, called by Sir H. H. Johnston the Malanje cedar. The South African species are *C. juniperoides*, the so-called Cape cedar, and *C. cupressoides*, the sapreehout. The former is a tree from 30 to 40 feet high, and occurs only on the Cedar Mountains, while the latter is only 10 to 12 feet or rarely 15 feet high, but is common on all the mountains of the south-western districts. When recently the author heard that some "Sapree" trees in the Baviaanskloof Mountains were 50 to 60 feet high, he suspected at once that this must be a different species, and an examination of some ripe cones proved that this tree is quite distinct from the common *C. cupressoides*.—The Glacial conglomerate in the Table Mountain series near Clanwilliam: A. W. Rogers. This communication is an extension of one read before the society in 1901. The conglomerate with glaciated pebbles has now been traced through a distance of about 23 miles near Clanwilliam.—South African Verbenaceæ, supplementary note: H. H. W. Pearson.—Further note on factorisable constituents: Thos. Muir.—South African Hymenoptera: P. Cameron.—On the structure of the endothiodont reptiles: R. Broom.

October 26.—Sir David Gill, K.C.B., F.R.S., vice-president, in the chair.—The rocks of Tristan d'Acunha, brought back by H.M.S. *Odin*, Commander Pearce, R.N., and their bearing on the question of the permanence of ocean basins: E. H. L. Schwarz. Through the courtesy of Commander Pearce, of H.M.S. *Odin*, a number of specimens were recently obtained for the South African Museum from the island group of Tristan d'Acunha. The islands are described in the *Challenger* reports, and from the accounts published in them it is evident that while Inaccessible Island and Tristan d'Acunha itself are ordinary volcanic islands, Nightingale Island is a gigantic agglomerate neck like those that the author has described from Griqualand East, on the flanks of the Drakensberg Mountains. Two rocks of a type unusual to volcanic islands were brought back by the expedition; one was a white mica and biotite gneiss from Tristan d'Acunha, the other a lava containing foreign fragments from Nightingale Island.

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## DIARY OF SOCIETIES.

### THURSDAY, DECEMBER 15.

**ROYAL SOCIETY**, at 4.30.—On the Ultra-violet Spectrum of Gadolinium: Sir William Crookes, F.R.S.—An Analysis of the Results from the Falmouth Magnetographs on "Quiet" Days during the Twelve Years 1891 to 1902: Dr. C. Chree, F.R.S.—The Halogen Hydrides as Conducting Solvents. Part iii. Preliminary Note: B. D. Steele.—The Halogen Hydrides as Conducting Solvents. Part iv. Preliminary Note: B. D. Steele, D. McIntosh, and E. H. Archibald.—Effects of Temperature and Pressure on the Thermal Conductivities of Solids. Part i. The Effect of Temperature on the Thermal Conductivities of some Electrical Insulators: Dr. C. H. Lees.—The Basic Gamma Function and the Elliptic Functions: Rev. F. H. Jackson, R.N.—On the Normal Series satisfying Linear Differential Equations: E. Cunningham.

**INSTITUTION OF ELECTRICAL ENGINEERS**, at 8.—Discussion on Mr. Searle's Paper, Studies in Magnetic Testing; Followed by The Combination of Dust Destructors and Electricity Works, Economically Considered: W. P. Adams.

**LINNEAN SOCIETY**, at 8.—The Ecology of Woodland Plants: Dr. T. W. Woodhead.—Experimental Studies on Heredity in Rabbits: C. C. Hurst.

### FRIDAY, DECEMBER 16.

**INSTITUTION OF MECHANICAL ENGINEERS**, at 8.—Heat Treatment Experiments with Chrome-Vanadium Steel: Capt. H. Riall Sankey and J. Kent-Smith.—Messrs. Seaton and Jude's Paper on Impact Tests on the Wrought Steels of Commerce will be discussed.

**INSTITUTION OF CIVIL ENGINEERS**, at 8.—Folkestone Harbour: Cylinder-Sinking at the Root of the Old Pier: R. H. Lee Pennell.

### MONDAY, DECEMBER 19.

**SOCIETY OF ARTS**, at 8.—Musical Wind Instruments, Flutes: D. J. Blaikley.

**INSTITUTE OF ACTUARIES**, at 5.—On the Retrospective Method of Valuation: Frederick Bell.

**FARADAY SOCIETY**, at 8.—The Electric Furnace: its Origin, Transformation, and Applications. Part ii.: A. Minet.—Electrolytic Analysis of Cobalt and Nickel: F. Mollwo Perkin and W. C. Prebble.—(1) The Electrolytic Preparation of Tin Paste. (2) Note on the Electrolytic Recovery of Tin: F. Gelsharpe.

### TUESDAY, DECEMBER 20.

**ROYAL STATISTICAL SOCIETY**, at 5.

**INSTITUTION OF CIVIL ENGINEERS**, at 8.—Discussion on the Construction of a Concrete Railway-Viaduct: A. Wood-Hill and E. D. Pain.

### WEDNESDAY, DECEMBER 21.

**GEOLOGICAL SOCIETY**, at 8.—Certain Genera and Species of *Lycoteratidæ*: S. S. Buckman.—(1) The Leicester Earthquakes of August 4, 1893, and June 21, 1904. (2) The Derby Earthquakes of July 3, 1904. (3) Twin Earthquakes: Dr. C. Davison.

**ROYAL MICROSCOPICAL SOCIETY**, at 8.—The Theory of Highly Magnified Images: J. W. Gordon.

**ROYAL METEOROLOGICAL SOCIETY**, at 7.30.—Discussion of Mr. F. J. Brodie's paper, Decrease of Fog in London during Recent Years. Followed by The Study of the Minor Fluctuations of Atmospheric Pressure: Dr. W. N. Shaw, F.R.S., and W. H. Dines.

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